

MEDICAL



A GREAT INNOVATION.

The 96-Ton Electric Locomotives on the B. & O. Railroad.

USED IN THE BALTIMORE TUNNEL.

The Most Modern and First Important Application of Electricity to the Steam Trunk Railroad in the World—A Full Description of the Wonderful Locomotives—The Ultimate Results of the Innovation None Can Tell.

One of the great electric locomotives which are to haul both passenger and freight trains through the Baltimore & Ohio tunnel at Baltimore has reached its destination, and is now undergoing a series of tests upon the line. So far the tests have proved satisfactory.

The tunnel through which these locomotives will pull the trains runs under the city of Baltimore, and was constructed for the purpose of giving to the Baltimore & Ohio railroad a clear route through to the north. Previous to its construction all trains on this railroad going north were ferried across the harbor from Locust Point to Canton. The saving of time effected by the service through the tunnel will allow the railroad to compete with the Pennsylvania or Union lines on equal terms.

The tunnel is the longest soft earth tunnel in the world. It is 7,339 feet, or nearly one mile and a half long, twenty-seven feet high, and twenty-two feet wide, and its total cost is set down at \$7,500,000. It was begun in September, 1890, and finished early this year. It runs under Howard street, one of Baltimore's principal thoroughfares, and was

mounted upon the axle itself, but upon a sleeve through which the axle passes. When the current is turned into the motor the armature revolves and communicates its motion to the wheel by a novel method. Strung on to the ends of the sleeve is a cast steel star, each arm of which carries two cushions of rubber. In each wheel are reciprocators into which these arms are pressed. As the armature rotates, the arms of the star revolve and the wheels on the axles are propelled forward. This method of suspension allows the armature to revolve freely and adjust itself to any unevenness of the track.

The cabin is sheathed inside with wood. It has windows on all sides to give an unobstructed view. Set up on one end is a series parallel controller, a wonderful piece of ingenious mechanism, turning the greatest pull exerted as the train starts, and no power is wasted. This is operated by a hand wheel. The motion of the motors may be instantly reversed by pulling a small reversing lever, protruding through the top of the controller. Above the controller are the instruments which tell the driver the amount and pressure of the current the motors are taking. A slot in the floor enables him to keep his eye on the commutators of the motors.

There is a sloping shield on each side of the cab, forward and aft. One shield carries a headlight and bell, the other a headlight and whistle. The locomotive is fitted with sand boxes and air-brakes. The compressed air for the brakes and whistles is pumped into the tanks by an oscillating cylinder air pump, operated by a small electric motor.

As the pressure in the tanks decreases an automatic device speeds up the motor, which stops as soon as the air in the tanks is at the right pressure. Contact with the overhead conductor is effected by means of a sliding shuttle-like shoe of brass, which is fixed to a flexible support fastened to the top of the cab. This "trolley" support is diamond shaped and compressible, contracting and expanding as the height

THE EDUCATION OF PLANTS.

More than a hundred years ago a Jesuit missionary found a certain bark (now called quinine) in use among the tribes of Peru as a cure for fever. This led to the discovery of quinine—the alkaloid and active principle. Originally containing but a very small percentage of the active principle, the bark of this tree, under careful cultivation, now yields several times the amount.

By the same method the Shakers of Mt. Lebanon (N. Y.) have developed, both as to quantity and quality, the medicinal principles of the herbs from which the Shaker Digestive Cordial, their well-known remedy for indigestion and dyspepsia, is now made. They have persuaded nature to do for suffering humanity vastly more than she at first intended. As quinine is without a rival in its field so this preparation of the Shakers is destined to become, for all the ailments of the digestive tract,—now grouped under the general head of dyspepsia.

Some of the symptoms calling for its use are as follows: Distress after eating; sickness and nausea; pains in the head, chest, sides, and back; foul taste in the mouth and the rising of an offensive gas from the stomach; constipation and irregular action of the bowels; palpable appetite; sick headache; ringing in the ears; sleepless; the "digests"; a tired and weary feeling; sore muscles; mental depression, etc.

To relieve and cure this universal disease (the source of most others), the Shaker Digestive Cordial is expressly adapted. Let a patient in a special case take a dose of it, and the results are felt to a degree. Unlike quinine it is pleasant to the taste, always active, never harmful. For this the Shakers pledge their reputation as herbalists. And its success thus far bears them out.

To settle whether it is what you need try a ten-cent bottle. For sale by nearly all druggists.

FINANCE AND TRADE.

The Features of the Money and Stock Markets.

NEW YORK.—Money on call easy at 1½ per cent; last loan 1 per cent; closed at 1 per cent. Prime mercantile paper 5½ per cent. Sterling exchange strong at \$1 90/90. Silver certificates 67¢/67¢. The total sales of stocks were \$10,400,000.

The stock market was unsettled during the forenoon, but was strong during the afternoon, with some few exceptions. The favorable character of the government crop report gave tone to the market. A demonstration was made against Reading, based on the fact that J. L. Smith did not present the bill to the Senate, and of the Readings organization, but it was not very effective, the stock closing only ½ per cent below yesterday. The market closed generally strong. Compared with yesterday's prices show gains in a majority of cases.

The bond speculation was strong and active, the total amount aggregating \$126,000. Investors were anxious to get bonds firm.

State bonds inactive.

Railroad bonds strong.

BOSTON.—Money on call advanced the price of brown sheets to 6½ per cent; do 4x6½ square 5½ per cent; do 4x8 5 per cent. Receipts for 100 barrels of sugar were \$1 25/25; mixed lots 94 7/8d 60c light hogs \$1 70/90; sheep weaker; spring lamb \$1 60/60; sheep were in demand at \$1 25/25 for inferior; \$1 60/60 for common to good fat clips, and \$1 50/50 for choice. Receipts, cattle 15,000 head; calves 1,000 head; hogs 7,500 head; sheep 17,000 head.

CINCINNATI.—Hogs slow at \$100 lower; \$4 40¢ & 20¢; receipts 2,500 head; shipments 700 head.

DRY GOODS.

BALTIMORE.—Agents have advanced the price of Neward's flannel 2½¢ per yard. Henrietta brown sheeting to 6½ per cent; do 4x6½ square 5½ per cent; do 4x8 5 per cent. Receipts for 100 barrels of sugar were \$1 25/25; mixed lots 94 7/8d 60c light hogs \$1 70/90; sheep weaker; spring lamb \$1 60/60; sheep were in demand at \$1 25/25 for inferior; \$1 60/60 for common to good fat clips, and \$1 50/50 for choice. Receipts, cattle 15,000 head; calves 1,000 head; hogs 7,500 head; sheep 17,000 head.

PHILADELPHIA.—For Pittsburgh, \$1 40/40; for New York, \$1 35/35; Pittsburgh and East, \$1 30/30; Pittsburgh, \$1 25/25.

PITTSBURGH.—For New York, \$1 35/35; Pittsburgh, \$1 25/25.

DETROIT.—For Wayne, \$1 35/35; for Toledo, \$1 30/30; for Cleveland, \$1 25/25.

ST. LOUIS.—For Wayne and Chicago, \$1 35/35; for Toledo, \$1 30/30; for Cleveland, \$1 25/25.

DETROIT.—For Wayne and Toledo, \$1 35/35; for Cleveland, \$1 30/30.

DETROIT.—For Toledo, \$1 30/30.